

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:
recording duty ratio detecting means for detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal; and

light beam intensity modulating means for modulating the intensity of the light beam based on the detected recording duty ratio,

wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and

wherein said light beam intensity modulating means comprises means for modulating the intensity of the light beam to a higher level in a highlight area of the image when compared to other areas of the image that have higher gradation values.

2. (canceled).

3. (currently amended): An apparatus according to ~~claim 2~~claim 1, wherein said highlight area ~~comprises a highlight area smaller~~has a gradation value that is less than 25 % of all gradationsa maximum gradation value of the image recorded on said photosensitive medium.

4. (previously presented): An apparatus according to claim 1, wherein said recording duty ratio detecting means comprises a low-pass filter.

5. (previously presented): An apparatus according to claim 1, wherein said recording duty ratio detecting means comprises means for detecting a recording duty ratio corresponding to a given area in the image recorded on said photosensitive medium.

6. (currently amended): ~~An apparatus according to claim 5, further comprising:~~ An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:

recording duty ratio detecting means for detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal, said recording duty ratio detecting means comprises means for detecting a recording duty ratio corresponding to a given area in the image recorded on said photosensitive medium;

light beam intensity modulating means for modulating the intensity of the light beam based on the detected recording duty ratio; and

random number applying means for varying the position of the given area in the image with a random number.

7. (currently amended): ~~An apparatus according to claim 5, further comprising:~~ An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:

recording duty ratio detecting means for detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal, said recording duty ratio detecting means comprises means for detecting a recording duty ratio corresponding to a given area in the image recorded on said photosensitive medium;

light beam intensity modulating means for modulating the intensity of the light beam based on the detected recording duty ratio; and

random number applying means for varying the size of the given area in the image with a random number.

8. (currently amended): ~~An apparatus according to claim 5,~~ An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:

recording duty ratio detecting means for detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal, said recording duty ratio detecting means comprises means for detecting a recording duty ratio corresponding to a given area in the image recorded on said photosensitive medium; and

light beam intensity modulating means for modulating the intensity of the light beam based on the detected recording duty ratio,

wherein said light beam intensity modulating means comprises random number applying means for applying a random number to the detected recording duty ratio corresponding to the given area in the image, and means for modulating the intensity of the light beam based on the recording duty ratio to which the random number is applied by said random number applying means.

9. (original): An apparatus according to claim 1, wherein said light beam comprises a plurality of light beams for simultaneously scanning said photosensitive medium to record the image thereon, and wherein said recording duty ratio detecting means comprises a plurality of recording duty ratio detecting means associated respectively with images recorded on the photosensitive medium based on respective image signals to generate said light beams, and said light beam intensity modulating means comprises a plurality of light beam intensity modulating means associated respectively with recording duty ratios detected by said recording duty ratio detecting means.

10. (currently amended): ~~An apparatus according to claim 1,~~ An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:

recording duty ratio detecting means for detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal; and

light beam intensity modulating means for modulating the intensity of the light beam based on the detected recording duty ratio,

wherein said light beam comprises a plurality of light beams for simultaneously scanning said photosensitive medium to record the image thereon, and wherein said recording duty ratio detecting means comprises means for determining an average recording duty ratio of images recorded on the photosensitive medium based on respective image signals to generate said light beams, and said light beam intensity modulating means comprises means for modulating the brightnesses of said light beams based on said average recording duty ratio.

11. (currently amended): An apparatus for recording an image by scanning a photosensitive medium which is fed in an auxiliary scanning direction, with a light beam generated based on an image signal in a main scanning direction substantially perpendicular to said auxiliary scanning direction, comprising:

present recording duty ratio detecting means for detecting a present recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal;

light beam intensity modulating means for modulating the intensity of the light beam based on the detected present recording duty ratio;

preceding recording duty ratio detecting means for detecting a preceding recording duty ratio of the image at a position scanned later than a position on the image corresponding to said present recording duty ratio detecting means in the main scanning direction; and

intensity modulation correcting means for comparing the detected preceding recording duty ratio and the detected present recording duty ratio to correct the modulation of the intensity of the light beam with said light beam intensity modulating means.

12. (currently amended): An apparatus according to claim 11, wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and said light beam intensity modulating means comprises means for modulating the intensity of the light beam to a higher level in a highlight area which ~~is smaller~~ has a gradation value that is less than 25 % of all gradations a maximum gradation value of the image.

13. (currently amended): An apparatus according to claim 12, wherein said preceding recording duty ratio is of a value corresponding to the highlight area ~~which is smaller than 25 % of all gradations of the image~~, and said present recording duty ratio is of a value corresponding to an area except the highlight area ~~which is smaller than 25 % of all gradations of the image~~, and wherein said intensity modulation correcting means comprises means for correcting the modulation of the intensity of the light beam to cause the intensity of the light beam to return ~~from a given position in~~ the higher level corresponding to the highlight area to a normal intensity.

14. (currently amended): A method of recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising the steps of:

detecting a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal; and

modulating the intensity of the light beam based on the detected recording duty ratio,
wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and said step of modulating the intensity of the light beam comprises the step of modulating the intensity of the light beam to a higher level in a highlight area of the image when compared to other areas of the image that have higher gradation values.

15. (currently amended): A method according to claim 14, wherein ~~said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and said step of modulating the intensity of the light beam comprises the step of modulating the intensity of the light beam to a higher level in a~~ said highlight area has a gradation value that is less which is smaller than 25 % of all gradations a maximum gradation value of the image.

16. (new): An apparatus for recording an image by scanning a photosensitive medium with a light beam generated based on an image signal, comprising:

a recording duty ratio detecting circuit that detects a recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal; and

a light beam intensity modulating circuit that modulates the intensity of the light beam based on the detected recording duty ratio,

wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image, and

wherein said light beam intensity modulating circuit modulates the intensity of the light beam to a higher level in a highlight area of the image when compared to other areas of the image that have higher recording duty ratios.

17. (new): An apparatus for recording an image by scanning a photosensitive medium which is fed in an auxiliary scanning direction, with a light beam generated based on an image signal in a main scanning direction substantially perpendicular to said auxiliary scanning direction, comprising:

a present recording duty ratio detecting circuit that detects a present recording duty ratio of an image to be recorded on the photosensitive medium based on the image signal;

a light beam intensity modulating circuit that modulates the intensity of the light beam based on the detected present recording duty ratio;

a preceding recording duty ratio detecting circuit that detects a preceding recording duty ratio of the image at a position scanned later than a position on the image corresponding to said present recording duty ratio detecting circuit in the main scanning direction; and

intensity modulation correcting circuit that compares the detected preceding recording duty ratio and the detected present recording duty ratio to correct the modulation of the intensity of the light beam with said light beam intensity modulating circuit.

18. (new): The apparatus according to claim 16, wherein said highlight area has a gradation value that is less than 25 % of a maximum gradation value of the image recorded on said photosensitive medium.

19. (new): The apparatus according to claim 1, wherein the intensity of the light beam is set to a first intensity value for a highlight area that has a gradation value less than or equal to 6 % of a maximum gradation value of the image recorded on said photosensitive medium, and wherein the intensity of the light beam is set to a second intensity value, which is lower than the first intensity value, for an area of the image that has a gradation value greater than or equal to 25 % of the maximum gradation.

20. (new): The method according to claim 14, wherein the intensity of the light beam is set to a first intensity value for a highlight area that has a gradation value less than or equal to 6 % of a maximum gradation value of the image recorded on said photosensitive medium, and wherein the intensity of the light beam is set to a second intensity value, which is lower than the first intensity value, for an area of the image that has a gradation value greater than or equal to 25 % of the maximum gradation.

21. (new): The apparatus according to claim 16, wherein the intensity of the light beam is set to a first intensity value for a highlight area that has a gradation value less than or equal to 6 % of a maximum gradation value of the image recorded on said photosensitive medium, and

wherein the intensity of the light beam is set to a second intensity value, which is lower than the first intensity value, for an area of the image that has a gradation value greater than or equal to 25 % of the maximum gradation.

22. (new): The apparatus according to claim 19, wherein the intensity of the light beam transitions linearly from the first intensity value to the second intensity value for areas of the image that have gradation values between 6 % and 25 % of the maximum gradation.

23. (new): The method according to claim 20, wherein the intensity of the light beam transitions linearly from the first intensity value to the second intensity value for areas of the image that have gradation values between 6 % and 25 % of the maximum gradation.

24. (new): The apparatus according to claim 21, wherein the intensity of the light beam transitions linearly from the first intensity value to the second intensity value for areas of the image that have gradation values between 6 % and 25 % of the maximum gradation.

25. (new): The apparatus according to claim 1, wherein the recording duty ratio detecting means detects a first recording duty ratio at a first position of the image to be recorded and a second recording duty ratio at a second position of the image to be recorded later than the first position of the image, and

wherein, during the recording of the first position of the image, the light beam intensity modulating means is adjusted based on the first recording duty ratio and the second recording duty ratio.